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## The Dutch Network: Types of Interlocks and Network Structure

FRANS N. STOKMAN, FRANS W. WASSEUR  
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### THE CORPORATIONS

Of particular interest for comparison with the other national networks is the position of the commercial banks in the Dutch network. In contrast with the surrounding countries, particularly Germany and (until 1934) Belgium, the Dutch commercial banks were never engaged in large-scale financial participations in Dutch industry. Until the 1960s even the provision of long-term credit to industry was not of any significance for them. Besides acting as issuing houses, their activities were confined to the provision of short-term credit on current accounts.

In 1976 the Dutch banking sector was dominated by four major banks (Bosman, 1973; de Roos, 1982). The ABN bank was the result of a merger in 1964 between the *Nederlandse Handel Maatschappij* and the *Twentsche Bank*. The first was founded in 1824 to strengthen trade relations between the Netherlands and its colonies but developed after 1880 into a fully fledged bank with a strong international orientation, although the Dutch East Indies remained its most important area of activity. The *Twentsche Bank* was founded in 1861, particularly to provide credit to the textile industry of the Twente region. After 1964 several other medium-sized banks were taken over by ABN, most importantly the *Hollandsche Bank Unie* and the *Mees & Hope Bank*. ABN is still the most internationally oriented bank in the Netherlands with a large network of offices abroad. The AMRO bank, on the contrary, has always had a strong orientation towards Dutch industry. Like ABN, it resulted from a merger in 1964, this time between the *Amsterdamsche Bank* and the *Rotterdamsche Bank*. In its early history the *Amsterdamsche Bank* (founded in 1871) was involved in financial participations in Dutch colonial industry and it remained very active as an issuing house. The *Rotterdamsche Bank*, founded in



1863, has always been strongly oriented towards Dutch industry and to trade with Germany. After 1964 AMRO took over medium-sized banks such as Pierson, Heldring en Pierson. The third major bank is the RABO, which resulted from the 1972 merger of two co-operative banks: the Centrale Raiffeisen-Bank and the Cooperatieve Centrale Boerenleenbank. Both the central and the local banks are co-operatives and they have always been strongly oriented towards the agricultural sector but since the 1970s the policy of the RABO bank has been aimed at its development into a fully fledged commercial bank. The fourth large bank is the NMB, founded in 1927 to create more opportunities for the provision of credit to the retail sector and medium-sized industry. The Dutch state has a 23 per cent participation in NMB.

In terms of size, a large gap is observed between these four large banks and the other banks. In 1976 only four middle to large banks were left that were sizeable enough to be selected. The other ten selected commercial banks were subsidiaries of foreign banks. Because of the restricted policy of the Dutch commercial banks with respect to direct financial participation and to the provision of long-term credit, the great demand for these forms of capital provision after the Second World War led to the creation in 1945 of a special joint venture owned by the state (50 per cent of the shares), commercial banks, savings banks and insurance companies. This joint venture has operated since 1963 under the name of the Nationale Investeringsbank or NIB. A large part of its credits are given as postponed loans guaranteed by the government. In 1948 the predecessor of the NIB and a large number of banks and insurance companies created a new joint venture for direct financial participation, the Nationale Participatie Maatschappij or NPM. Although the commercial banks have extended their activities to the provision of long-term credit and other activities that were previously reserved for savings banks, the main providers of long-term credit remain the insurance companies, savings banks and pension funds. Of the latter, it was possible to include only the pension fund of the civil servants.

The fact that the Dutch banks never developed into investment banks is a consequence of the orientation of the Dutch economy towards international trade and commercial activities, particularly those related to the Dutch colonies. Colonial capital is one of the main sources of present-day large corporations. The most important one is the Koninklijke Nederlandse Petroleum Maatschappij (Royal Dutch Petroleum) and the name it had until 1949 – Royal Dutch Company for the Working of Petroleum Wells in the Netherlands Indies – clearly shows this colonial origin (see Gerretson, 1958). Other examples are the conglomerate OGEM, the Overseas Gas and Electricity Company,



and Internatio-Müller, which was a merger of a Dutch Indies trade company (Internatio) with a shipping company (Müller). As was the case with ABN, these corporations still had a strong international orientation. Of course, this is particularly the case with the Royal Dutch, which created in 1906 the international Shell group with 'Shell' Transport and Trading of Britain. In this way the complementary activities of the two corporations could be combined and integrated. Shell was the first Anglo-Dutch bi-national corporation.

Traditionally, agriculture has been the second most important sector of the Dutch economy. One of the most decisive structural changes in the Dutch economy in the twentieth century, however, has been the growing importance of industry and services at the expense of agriculture (de Vries, 1978). In 1976 the contribution of agriculture and fishing to the national product had declined to only five per cent. Nevertheless, 28 of the 200 selected corporations in the present study had their main activities in agricultural products. The most important was Unilever, the second Anglo-Dutch, bi-national corporation, created 23 years later than Shell by a Dutch group of corporations known as the Margarine Unie and the British group, Lever Brothers (soap). Whereas in the Unilever group the Dutch and British partners were equally important, the Dutch interest in Shell was 60 per cent. The history of Unilever shows how Dutch corporations were forced to enter the international capital market because of the restricted role of the Dutch banks in direct investments and the provision of long-term credit (Wilson, 1954). Most of the other selected corporations in the agricultural sector were co-operatives of moderate size.

The Dutch industrial sector developed rather late, not earlier than 1890, but is now the second most important sector in the Dutch economy. Whereas the service sector contributed about 45 per cent of the Dutch national product in 1976, the contribution of industry (including energy and building) was about 36 per cent. The three major industrial corporations represent three different paths of industrial development in the Netherlands: Philips was the prototype of a family enterprise, AKZO resulted from a number of very large mergers, whereas Hoogovens (steel) was initiated by a coalition of the Dutch business elite and the state. Dutch industrial capital had rather strong links with German industrial capital, in contrast with the heavy British orientation of the international trade sector that originated from colonial capital. These connections resulted in the creation of two German-Dutch bi-national corporations according to the Shell and Unilever models: Estel by Hoogovens and Hoechst (steel) and VFW-Fokker by VFW and Fokker (aircraft construction). Both bi-nationals have since been dissolved (see chapter 14). Other examples of close connections were AKZO, which produced synthetic fibres, in the



German-Dutch operating company Enka-Glanzstoffe and the strong German links of the Dutch conglomerate SHV (Steenkolen Handels Vereniging). Baudet and Fennema (1983) show how, after 1945, the two business orientations merged into a larger Atlantic orientation due to Marshall aid and the development of the Dutch East Indies towards independence. Shell, Unilever, C&A<sup>2</sup>, Philips and AKZO comprise the five largest Dutch corporations in terms of most size criteria.

## THE OVERALL STRUCTURE OF THE DUTCH NETWORK

The characteristics of the Dutch network of interlocking directorships are not completely unknown. The first study of interlocks in the Netherlands was done by Wibaut (1913) who followed, on a smaller scale, the research of Jeidels' study of the German banks (Jeidels, 1905). Wibaut found 300 firms interlocked with the nine largest banking institutions (Wibaut, 1913, p. 342). While his study focused on the interlocks between banks and production corporations, the first major study on the whole network of interlocking directorships was the study *Graven naar Macht* (Helmers et al., 1975). This book reported the results of several studies, conducted by students under the direction of Mokken and Stokman, concerning the network of interlocks among the largest 86 Dutch corporations of 1969, its stability over the 1960s, its association with financial participations and joint ventures and the personal interlocks with governmental agencies and committees. This study was followed by a similar study in 1972 (Mokken and Stokman, 1978 and 1979) as well as a number of more specific studies related to such policy areas as arts (Boon, 1975), nuclear energy (Zijlstra, 1979, 1982) and oil (Eggen and Neijens, 1979). Long term developments in the Dutch network of interlocking directorships have been studied by Baudet and Fennema (1983), who focused on the disintegration of the colonial network in the Dutch East Indies before and after independence. Work in progress includes Schijf (1978, 1984), who is studying the development of the Dutch network between 1886 and 1902. Directly related to the present study in 1976 is a study by Beekenkamp (1982, 1984) of the careers of the 250 president executives of the selected corporations. His results can be compared with an earlier study of the sociological aspects of the corporate elite in the Netherlands by Vinke (1961).

The 1969 and 1972 studies of the 70 largest corporations revealed a network of interlocking directorships with a very centralized structure. Moreover, all analyses indicated that the network of interlocks derived its structure mainly from the interlocks of financial corporations and institutions, particularly from those of commercial banks and insur-



ance companies. Therefore, a major conclusion of these studies was that interlocking directorships should be seen primarily as channels of information and control for the aggregation and provision of credit and capital. This interpretation was confirmed by a very strong positive correlation between financial participations and interlocking directorships (Helmerts et al., 1975, pp. 266 ff.), by the stability of the lines between production and financial corporations (Helmerts et al., 1975, pp. 249 ff.), and the disintegration of the network between production corporations after the elimination of persons with one or more positions in financial corporations (Helmerts et al., 1975, pp. 220 ff.).

The overall structure of the 1976 network among the 250 corporations seems to be well in line with these conclusions from the smaller 1969 and 1972 studies. After a short overview of this structure in the remainder of this section, the main focus of this chapter will be oriented towards the question of whether a closer look at different aspects of the network gives rise to a more differentiated interpretation of the network. The 1969 and 1972 studies failed to do this because they did not investigate the contribution of different types of interlocks to their overall structure of the network. This resulted in an over-emphasis on the finance-capital model, without due recognition of the fact that important parts of the network might better be interpreted in terms of other models (see chapter 1).

The 1976 network among the 250 corporations contained three components of directly or indirectly connected corporations. The largest component consisted of 190 corporations, the two other components consisting of two corporations each. The remaining 56 corporations were isolated. Of the 60 corporations outside the largest component about half of the corporations belonged to the wholesale and retail distribution sector (NACE sectors 61, 63 and 64), although they constituted only 20 per cent of all selected corporations. Of the total group of 48 wholesale and retail distribution companies 28 were isolated. Most other corporations outside the large component were either subsidiaries of foreign enterprises, particularly in the oil refining, chemical and banking sectors, or regionally oriented corporations, mainly in energy distribution and the food industry. Two commercial banks, ABN and AMRO, were directly connected with extremely high numbers of corporations, 56 and 54 respectively. The next corporations, the insurance corporation AGO and the chemical corporation AKZO were directly connected with 35 corporations. Among the 13 corporations with 26 or more lines, financial corporations were very strongly represented: two commercial banks (ABN and AMRO), the National Bank (NB), two joint ventures (NPM and NIB) and three insurance companies (AGO, the Nationale Nederlanden and



Table 6.1 Network of the core in the Netherlands

Number of interlocks within core																						
Name	Sector	Rush	ABN	AMRO	ENNIA	NS	Buhrmann-T	AGO	AKZO	NB	SHV	FGH	Heineken	Philips	Nat. Ned.	OGEM	RSV	NSU	Number of adjacent corporations in			
																			Core	Inner margin	Rest of network	Total
ABN	Banking	0.092	-	0	0	1	2	1	2	1	1	1	2	1	4	0	0	3	11	16	29	56
AMRO	Banking	0.065	0	-	3	2	1	2	1	2	2	0	3	1	2	1	2	0	12	13	29	54
ENNIA	Insurance	0.031	0	3	-	3	1	0	1	0	1	0	0	0	0	1	1	0	7	10	15	32
NS	Railways	0.026	1	2	3	-	0	0	1	1	2	0	0	0	1	0	2	1	9	9	14	32
Buhrmann-T	Paper	0.025	2	1	1	0	-	0	1	0	0	1	0	0	0	1	0	0	6	9	9	24
AGO	Insurance	0.021	1	2	0	0	0	-	0	2	1	0	1	1	0	0	0	3	7	9	19	35
AKZO	Chemical	0.021	2	1	1	1	1	0	-	1	2	1	0	1	1	0	2	0	11	5	19	35
NB	National Banking	0.019	1	2	0	1	0	2	1	-	1	0	1	1	1	0	0	1	10	6	11	27
SHV	Wholesale	0.019	1	2	1	2	0	1	2	1	-	0	0	0	1	0	1	1	10	7	12	29
FGH	Mortgage	0.019	1	0	0	0	1	0	1	0	0	-	0	1	0	1	0	0	5	9	9	23
Heineken	Beer	0.018	2	3	0	0	0	1	0	1	0	0	-	1	0	1	1	0	7	7	9	23
Philips	Electronic	0.018	1	1	0	0	0	1	1	1	0	1	1	-	1	0	1	0	9	6	8	23
Nat. Ned.	Insurance	0.018	4	2	0	1	0	0	1	1	1	0	0	1	-	0	0	2	8	8	16	32
OGEM	Engineering	0.017	0	1	1	0	1	0	0	0	0	1	1	0	0	-	1	0	6	8	9	23
RSV	Shipbuilding	0.016	0	2	1	2	0	0	2	0	1	0	1	1	0	1	-	1	9	5	10	24
NSU	Shipping	0.016	3	0	0	1	0	3	0	1	1	0	0	0	2	0	1	-	7	7	12	26



ENNIA). The five remaining corporations were production corporations. Three belonged to the transport sector (the Dutch railway corporation, NS, and two sea-transport corporations, HAL and NSU), one to the chemical sector (AKZO) and one was a conglomerate (SHV) classified in the wholesale distribution sector. The 26 corporations with only one or two lines belonged predominantly to the same categories as the 60 corporations outside the large component: production and distribution of energy (eight corporations), food, drink and tobacco (nine), wholesale and retail distribution (six), subsidiaries of foreign corporations (six) and seven other corporations.

In chapter 2 the size of the Dutch centre and core were given and compared with those of other countries. The composition of the core is given in table 6.1. If the composition of the core is compared with the 16 most central companies (as measured by their adjacency), the two financial joint ventures NPM and NIB and the sea-transport corporation HAL are seen to have been replaced by Heineken, Philips and OGEM. The remaining 13 corporations belonged to the 16 most central corporations according to both criteria. The density of the core was high: 56 per cent of all pairs of corporations had direct access to one another's highest boards of decision-making. No separate clusters can be observed in the core, showing that there was no more than one centre in the network as a whole. Moreover, 21 of the 67 lines in the core had multiplicity 2 or higher. This is a considerably higher percentage than for the network as a whole and indicates that a high number of lines in the core should be considered as strong lines. Nevertheless, it should be realized that the two commercial banks, ABN and AMRO, had no interlock with one another. The same holds for the three insurance companies in the core. The existence of one dense centre in the Dutch network does not preclude competition between corporations operating in the same market and it implies that these competing financial corporations were not oriented to different segments of the Dutch economy (which was the case with a number of less central financial companies).

Although the structure of the Dutch network can be considered still to have been centralized, the 1976 network was both less dense and less centralized than that of 1969. Comparing the network of 86 corporations in 1969 (at the end of a long period of economic expansion) with the 1972 and 1976 networks (in the middle of a period of economic stagnation), it can be observed that between 1969 and 1972 the number of lines was considerably reduced without many consequences for the centralized structure of the network as a whole. With the prolongation of the economic crisis into 1976, the network became less centralized without any further reduction in the total number of lines in the network. Mokken and Stokman (1979, p. 11) attributed the possibly



temporary looser structure of the network of interlocks to fundamental changes in financial relations among the largest corporations as a consequence of the prolonged economic crisis.

For the bi-nationals Shell, Unilever, Estel and VFW-Fokker, the boards of the bi-national corporations were selected according to the general selection criteria. Shell was isolated, Unilever belonged to the periphery, VFW-Fokker to the outer margin and Estel to the inner margin. If the Dutch parts of the corporations had been selected, it would have resulted in a more central position for both Royal Dutch Shell (just below the inner margin) and Hoogovens (in the core). Royal Dutch was connected with 17 Dutch corporations, among which were ABN and AKZO, both with double interlocks. The positions of Unilever and Fokker would have been unaffected.

Production corporations in the centre tended to be large (in terms of wage-bills). This confirms the correlation between size and number of interlocks that has been reported in a large number of studies (see Allen, 1974; Pennings, 1980). Moreover, they tended to have a low ratio between turnover and assets, which indicates that industrial corporations tended to be more central in the network than trade and service corporations. Finally, production corporations in the centre tended to have a low ratio between liabilities and total assets as well as a high ratio between current liabilities and total liabilities. This indicates that central corporations tended to be solvent corporations which were nevertheless rather dependent on short-term credit. These results from a discriminant analysis, in which the economic characteristics of production corporations were used to predict their location in the centre, outer margin or periphery of the network, corroborate the interpretation of the overall structure of the network in terms of the finance-capital model. With the above variables it was possible to predict the location of 66 per cent of the corporations correctly. None of the corporations in the centre were predicted as belonging to the periphery or vice versa.<sup>3</sup> More detailed analyses of the network structure in the remainder of this chapter will demonstrate, however, that the finance-capital model is unable to explain all major aspects of the Dutch network and that other models need to be introduced for a better understanding of the network structure.

## TYPES OF INTERLOCKS AND NETWORK STRUCTURE

As has been explained in chapter 2, interlocks always have a personal basis but sometimes an institutional basis as well. In chapter 2 it has been argued that the combination of positions in an interlock can be used as an indirect method of determining the importance of different



types of interlocks as indicators of institutional links between corporations. In particular, primary financial interlocks, carried by executives of financial corporations, might be interpreted in terms of the finance-capital model. Primary production interlocks, carried by executives of production corporations, can also be interpreted in terms of this model, in so far as they serve as connections between production and financial corporations or coincide with financial participations. In this section the structure that is formed by these interlocks will be investigated. Moreover, the role of other types of interlocks in strengthening this structure will be examined. This will give an indication of whether these other types can be interpreted in terms of the finance-capital model or have a completely different structure and so have to be interpreted in terms of other models. An investigation of the contribution of the different types of interlocks to the network structure can therefore be seen as a first step towards an analysis of the importance of different models for the network as a whole.

The most important aspect of the structure of the whole network is its centralized nature, the existence of a densely connected core around which the main part of the rest of the network is built. For this reason the investigation will begin with the relative importance of the different types of interlocks within and between the four centrality groups: core, inner margin, outer margin and periphery. The first row of table 6.2 gives the distribution of all interlocks over the different groups. This row has been given as a yardstick against which the concentration of the various types of interlock in certain parts of the network can be judged. It can be seen that certain definite patterns existed. Primary financial interlocks had special relevance for the core, both for its inside connections and for its connections with the rest of the network: all columns of table 6.2 concerning the core show higher percentages that are found in row 1 for all interlocks. This was not the case for primary production interlocks, which were somewhat underrepresented in all columns concerning the core and somewhat overrepresented in the connections between inner margin, outer margin and periphery. Induced financial and production interlocks contribute particularly to the density within the outer margin. This is in sharp contrast with the unclassified interlocks. Unclassified interlocks were concentrated within the centre: core, inner margin and the bipartite network between core and inner margin show considerably higher percentages. This is even more the case for the unclassified interlocks that are carried by persons with four or more positions. They show a very strong bias towards the centre.

To summarize, the primary financial interlocks and the unclassified interlocks by persons with four or more positions contributed particularly to the *overall* structure of the network. The unclassified



Table 6.2 Centrality groups and types of interlocks in the Netherlands (%)

Types of interlocks	Centrality groups									
	Within					Between				
	Core	Inner margin	Outer margin	Periphery	c-i	c-o	c-p	i-o	i-p	o-p
All	8	5	20	3	14	22	0	23	0	4
Primary										
Financial	10	3	6	0	20	37	0	24	0	0
Production	4	2	22	5	13	20	0	25	1	7
Induced										
Financial	7	6	30	0	8	19	0	30	0	0
Production	6	2	32	1	4	33	0	22	0	1
Unclassified										
All	10	7	19	4	17	18	0	21	0	5
By big linkers	14	10	10	0	22	20	0	23	0	0

Note: Absolute numbers are in parentheses.



interlocks made a very significant contribution to the high density of the centre of the network, whereas the primary financial interlocks connected the core with the rest of the network. To a large extent, the outer margin was co-ordinated by the core through the primary financial interlocks, as the concentration of induced financial interlocks in the outer margin shows. Primary production interlocks were scattered throughout the whole network without a clear concentration in one or another part of the network. No clear co-ordination centre existed, in which the bulk of these interlocks came together, as was the case with the primary financial interlocks but such co-ordination as does occur takes place mainly in the outer margin. This implies that, whatever the significance and meaning of unclassified interlocks may be, they were generated by a completely different mechanism than the induced financial and production interlocks.

### THE NETWORK OF PRIMARY INTERLOCKS

Figure 6.1 gives a more detailed picture of the way in which primary interlocks contributed to the centrality of the two commercial banks, the three insurance companies and the two joint ventures NPM and NIB. With one exception, all the primary financial interlocks of ABN and AMRO were outgoing interlocks, i.e. interlocks carried by their own executives. These outgoing interlocks connected these banks with other financial corporations (particularly insurance companies and NPM and NIB) as well as with production corporations. The main difference between AMRO and ABN was that AMRO had outgoing interlocks to six insurance companies and 28 production corporations, as against one insurance company and 12 production corporations for ABN. The primary financial interlocks of the three insurance companies originated from incoming interlocks from the commercial banks and outgoing interlocks to other financial corporations (particularly the joint ventures NPM and NIB) as well as to production corporations. With only two exceptions, all the primary financial interlocks of NPM and NIB were due to incoming interlocks from the parent financial corporations and outgoing interlocks to production corporations. The primary interlocks give, therefore, a very clear hierarchical structure between three groups of central financial corporations. The highest hierarchical level consisted of the two largest commercial banks, ABN and AMRO, which had outgoing interlocks both to financial corporations at lower hierarchical levels and to production corporations. They were the main co-ordinators in the network and no other corporation was permitted to co-ordinate the policies of these two banks by primary interlocks to both banks. The second hierarch-



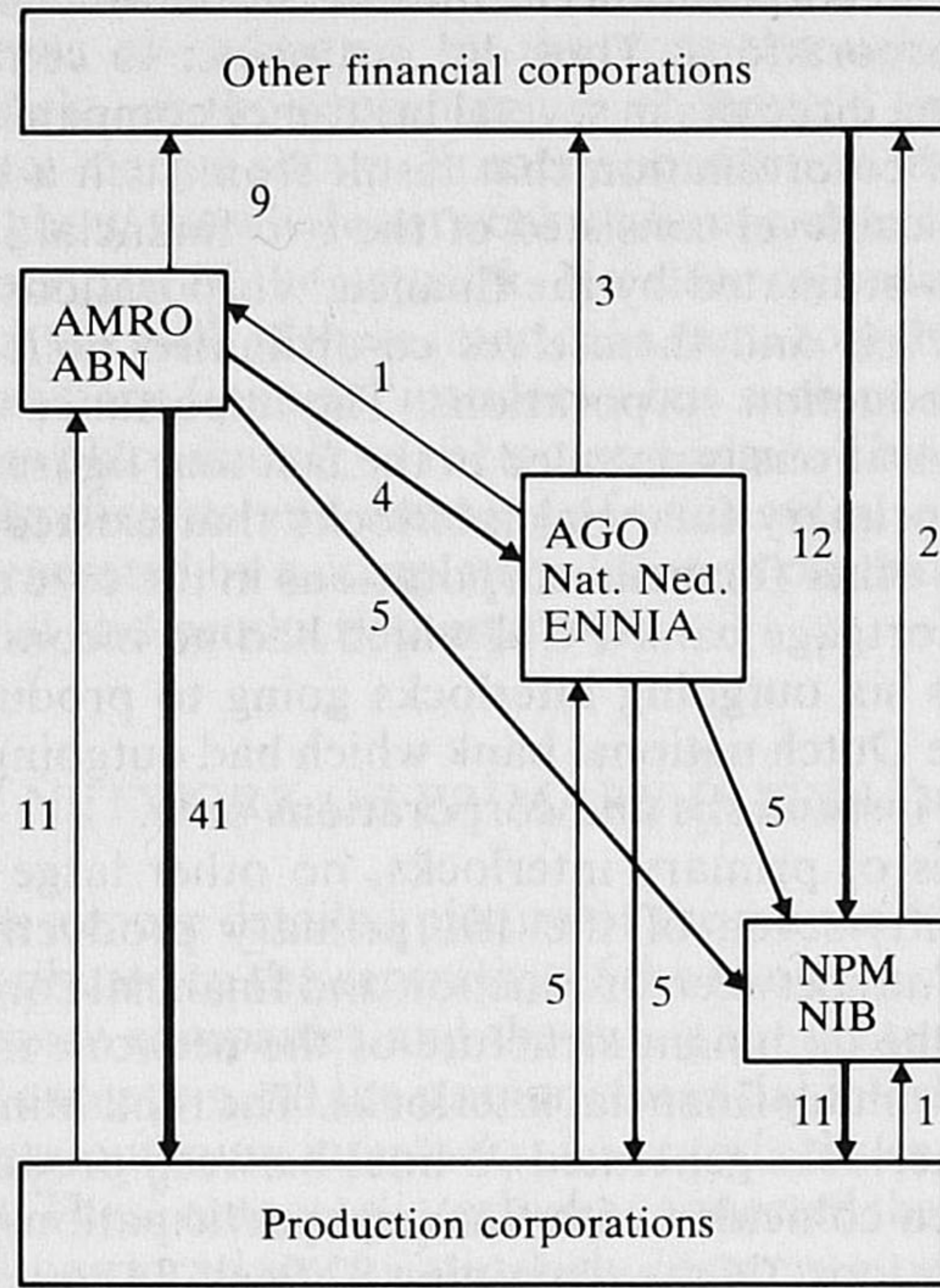
ical level consisted of three insurance companies that had incoming interlocks from the two commercial banks and outgoing interlocks both to financial corporations at the lowest hierarchical level and to production corporations. They did not object to commercial-bank executives being directors in several insurance companies, with all the possibilities of co-ordination that result from such a situation. The third hierarchical level consisted of the two financial joint ventures, which were co-ordinated by the financial corporations at the higher hierarchical levels and themselves co-ordinated policies in a large number of production corporations. The importance of these seven financial corporations is revealed in the fact that figure 6.1 contained 98 of all 125 primary financial interlocks that existed in the whole network. Two other financial corporations in the core did not fit this picture: the mortgage bank FGH which had no incoming interlocks and five of its six outgoing interlocks going to production corporations, and the Dutch national bank which had outgoing interlocks to state financial institutions and corporations only.

On the basis of primary interlocks, no other large clusters were discovered. Fifty-seven of the 161 primary production interlocks generated 50 lines between production and financial corporations and strengthened the dominant structure of the network that was determined by the primary financial interlocks. The remaining 104 primary production interlocks generated 95 lines between production corporations. Thirteen coincided with financial participations among production corporations. Of the remaining 82 lines, 34 could be explained by the fact that the production corporations produced complementary products. These lines played an important role in the dairy industry and in the chemical sector but other examples could be found in the steel, electro-technical, building and shipping sectors. Forty-eight lines could not be accounted for in this way as they connected production corporations having no horizontal or vertical market relations.

Between co-operatives a large number of institutional relations were maintained at the level of the governing boards and these directorships were considered as intermediate positions. If these interlocks are included together with the primary interlocks, a second cluster outside the overall centre of the network is revealed around RABO, the third major bank in the Netherlands. RABO is a commercial bank, strongly oriented towards the agricultural segment of the Dutch economy (see the first section) and had no incoming lines from the centre. It had two outgoing lines to the centre, to NPM and NIB, in which it participated. Figure 6.2 shows that RABO was the nucleus of a 2-clique of 11 corporations, of which several corporations in their turn were nuclei of 2-cliques of five or more corporations. In figure 6.2 these nuclei are placed into boxes. Only three of the corporations in the main RABO



*Figure 6.1 Primary interlocks of central financial corporations in the Netherlands*

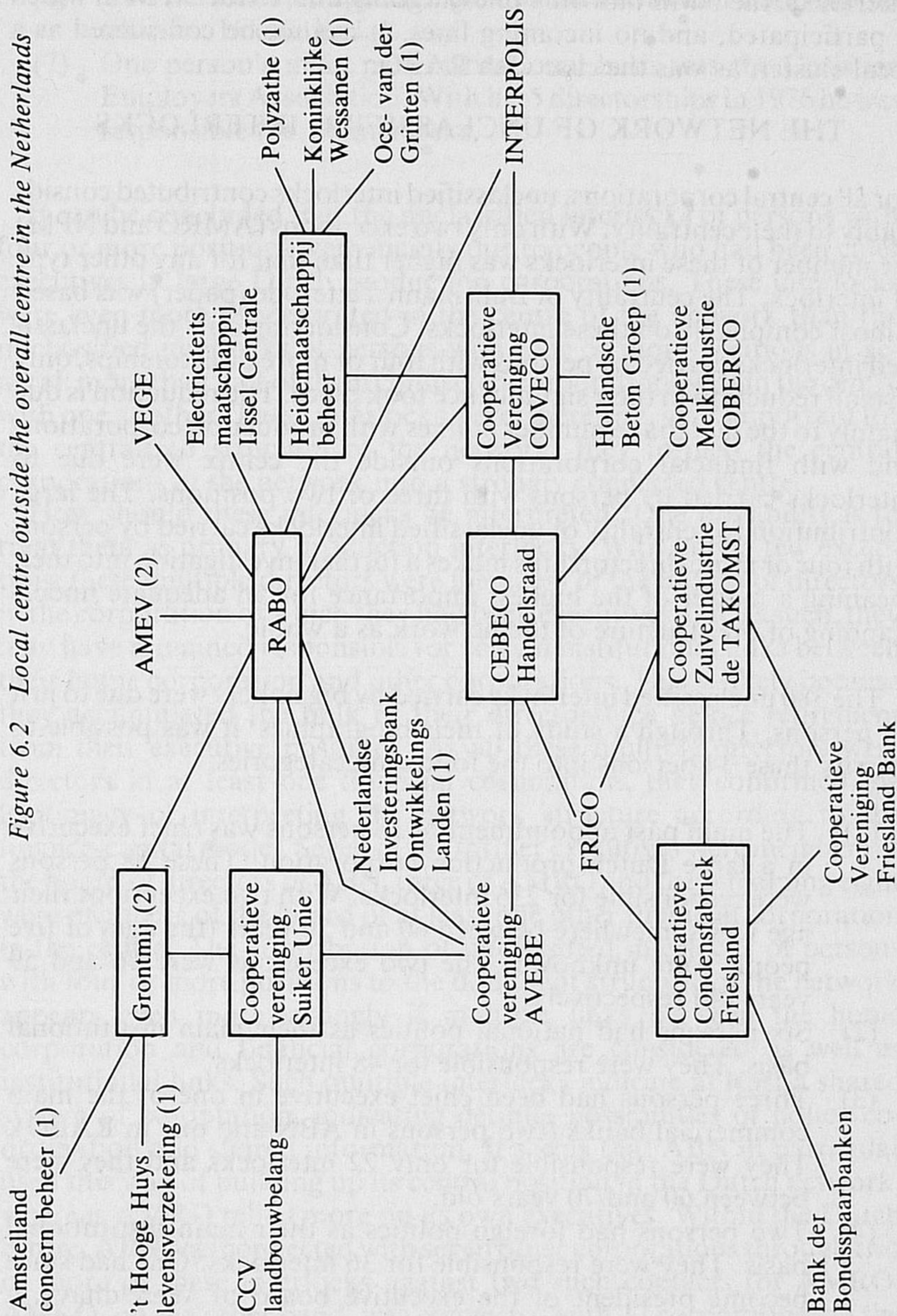


clique had incoming lines from the centre: the insurance company AMEV, a cultivation company Grontmij, and the 100 per cent subsidiary of NIB (the National Investment Bank for Developing Nations). With the exception of the IJssel Centrale, an electricity distribution company, all remaining corporations in the clique were agriculturally oriented. The RABO clique should, therefore, be considered as a local centre outside the network centre. The most interesting 2-clique in figure 6.2, besides the main RABO clique, is the CEBECO clique which connected the main cliques with two other agricultural cliques located almost entirely in Friesland (one of the Northern provinces of the Netherlands). CEBECO was a co-operative that was active in all kinds of agricultural products.

The positions of the three largest banks in the network can be summarized: the AMRO bank and the ABN bank in the heart of the core and the RABO bank as the nucleus of a local agricultural oriented cluster. The fourth large bank was the Dutch shopkeepers bank NMB, partly owned by the state (23 per cent) and by two insurance companies



Figure 6.2 Local centre outside the overall centre in the Netherlands



Note: The number of incoming primary lines from the overall centre is in parentheses.



(ENNIA and AMEV, with five per cent each). The NMB belongs to the outer margin, as was the case with the RABO. On the basis of primary interlocks, the NMB had only one outgoing line, to the NPM in which it participated, and no incoming lines. It cannot be considered as a local cluster, as was the case with RABO.

### THE NETWORK OF UNCLASSIFIED INTERLOCKS

For all central corporations, unclassified interlocks contributed considerably to their centrality. With only two exceptions (AMRO and NPM) the number of these interlocks was higher than that for any other type of interlock. The centrality of Buhrmann Tetterode (paper) was based almost completely on these interlocks. Considering only the unclassified interlocks carried by persons with four or more directorships, only a small reduction in their significance took place. The reduction is due mainly to the fact that a number of lines with production corporations and with financial corporations outside the centre were due to interlocks carried by persons with three or two positions. The large contribution to centrality of unclassified interlocks carried by persons with four or more directorships makes a further investigation into their meaning a matter of the highest importance for an adequate understanding of the structure of the network as a whole.

The 380 unclassified interlocks carried by big linkers were due to just 34 persons. Through a study of their biographies<sup>1</sup> it was possible to classify these 34 persons into the following categories.

- (1) The main past appointment of 18 persons was chief executive in a large Dutch production corporation. These 18 persons were responsible for 236 interlocks. With two exceptions their age was somewhere between 60 and 70 years (the ages of five people were unknown); the two exceptions were 56 and 59 years old respectively.
- (2) Six persons had national politics as their main institutional basis. They were responsible for 48 interlocks.
- (3) Three persons had been chief executive in one of the main commercial banks (two persons in ABN and one in RABO). They were responsible for only 22 interlocks and they were between 60 and 70 years old.
- (4) Two persons had foreign politics as their main institutional basis. They were responsible for 36 interlocks. One had since become president of the executive board of Wereldhave, a subsidiary of ROBECO which is an investment bank with international reputation.



- (5) Two persons had their main institutional basis in local politics. They were responsible for 12 interlocks.
- (6) Two persons had special legal qualifications and were responsible for 16 interlocks.
- (7) One person's main past institutional basis was the Christian Employers Association. With his 5 directorships in 1976 he was responsible for 10 interlocks.

It can be concluded that the unclassified interlocks of persons with four or more positions were mainly due to people who had been chief executives in large Dutch production corporations. These interlocks were even more concentrated in the centre of the network than the unclassified interlocks of persons with four or more positions in general: more than half of them connected corporations within the centre with one another. These interlocks were, therefore, very important for the centralized structure of the network: they formed the central corporations in the network into a strongly connected centre.

How should these interlocks be interpreted? One possibility is to treat them as primary production interlocks. With only a few exceptions these multiple directors were members of the boards of directors in the corporation of which they had been executives and, as such, they may have remained responsible for certain institutional links between their home corporation and other corporations. This is likely because they accumulated the bulk of their directorships before retirement from their executive positions. As all these multiple directors were directors in at least one financial corporation, they confirmed the legitimacy of interpreting the network structure according to the finance-capital model. Seven of the former executives were members of the board of directors of ABN, three of AMRO and the remaining eight were members of the board of at least one other financial corporation in the centre. The contribution of unclassified interlocks of persons with four or more positions to the dominant structure of the network appears even more strongly if multiple links between the home corporation and financial corporations are considered as well as institutional links. Such multiple interlocks indicate at least a shared system of co-optation, indicating definite possibilities of policy co-ordination and shared information. It seems that ABN in particular used this way of building up its central position in the Dutch network, whereas AMRO relied more on its own executives. Within the Dutch centre, ABN was connected with seven other corporations through two or more of these interlocks against two such contacts for AMRO. AMRO, on the other hand, was connected with 17 corporations in the centre through primary interlocks, as against 11 for ABN. Combining



the two gives an equally strong position for both banks. The difference in strategy between the two banks might well be attributed to the difference between the stronger international orientation of ABN and the more marked orientation towards Dutch industry of AMRO (see the first section).

Besides these institutional aspects, the interlocks of former executives must have had an important personal aspect too. These multiple directors should be considered as network specialists, persons who know what is going on in business and have experience in managing a large corporation. An important aspect of these interlocks is that the *personal* qualifications of the director serve as the common orientation to the corporations on whose board he or she sits. In so far as the lines between the corporations are induced by such personal qualifications, the interlocks cannot be directly interpreted as primary dyadic communication or control channels between corporations. Their prime function lies in their importance at the level of the network as a whole, knitting the centre together and making it possible for information to flow through the network – particularly around its central area. In the same way, it is likely that at least certain interlocks of non-retired executives of large financial and production corporations with many other positions also had a personal basis. It can be assumed that, particularly above a certain threshold of acquired positions, executives are offered new positions because of their broad experience in different sectors of the economy. Having a number of directorships enhances their opportunities for accumulating even more. In other words, certain executives become network specialists well before their retirement. This may hold particularly for executives of financial corporations, as business scanning is one of the main prerequisites for such corporations to pursue an adaptive strategy. From their home base, certain executives can, therefore, be seen to develop gradually into network specialists. During this process the home basis becomes gradually less important as an institutional base for the acquisition of new positions. This process accelerates after retirement, when the home corporation itself continues to profit from the person's business scanning by offering him or her an outside position on its own board of directors. The retired executive may, at the same time, remain responsible for certain institutional links. It should, therefore, be stressed that the division between primary interlocks and unclassified interlocks is gradual and not an abrupt split in which all primary interlocks can be interpreted as institutional links and all the unclassified as personal ones. For the assessment of the relative importance of personal and institutional bases of interlocks, the present data can give only indirect evidence. One may also doubt whether interviews give valid data on this matter and for this reason



Rutges (1983, 1984) has elaborated the two bases of interlocks into two simulation models. In this way it is hoped to assess which of the two models generate networks that are most similar to observed ones.

If the interlocks of former executives with four or more positions are compared with those of the non-retired executives with four or more directorships a fundamental difference is observed. The interlocks of the former executives knitted the centre together; the interlocks of those still in office were more important in connecting the centre with the rest of the network. The difference is particularly striking between executives and retired executives of production corporations. Two alternative explanations can be given. The first draws on the personal careers of network specialists: non-retired executives had not yet developed into fully fledged network specialists, their directorships were more strongly linked with their home base and a larger proportion of their interlocks were used to link the production corporations with complementary companies. The second explanation has to do with fundamental changes in institutional arrangements as a consequence of the economic crisis. While the former executives may maintain a number of directorships in the old affiliations of their company, perhaps until their ultimate retirement or death, the executives still in office take on the new affiliations. In this case the differential location of their interlocks in the network has to do with the present stage of transition of the network in a period of economic crisis. Further changes can be expected, as the interlocks of the former executives exhibit a time-lag factor. The smaller size of the centre and the lower density of the core in 1976 in comparison with 1969 and 1972 fit remarkably well with this explanation. Only a longitudinal study of long-term changes in the network could differentiate between these two explanations, a study that is at present being carried out (Van der Knoop et al., 1984).

## CONCLUSIONS

Most studies of interlocking directorships have emphasized one overall explanation for the pattern of links. This was also the case with former Dutch studies, in which the role of finance capital was emphasized to explain the overall structure. The contribution of the finance-capital model to the overall network structure can be studied most directly by an analysis of primary financial interlocks. These interlocks revealed a hierarchical structure among the financial corporations, with ABN and AMRO at the top and a separate local centre around the third main bank, RABO. Primary production interlocks to financial corporations and multiple unclassified interlocks strengthened this structure, particularly the position of ABN.



It has been shown that former executives of production corporations played an important role in the network, as their interlocks knitted the centre of the network together. These interlocks can partly be interpreted as institutional links of their home corporation. But their main importance seems to lie in the possibility created for business scanning by persons with a broad range of experience in the Dutch economy: the network specialists. Of course, executives with many positions, particularly those in financial corporations, perform this function as well, but it is assumed that their home base plays a more important role for the acquisition of new positions than is the case for retired executives: the personal development to network specialists is seen as a gradual process in which the significance of the home base diminishes over time. These unclassified interlocks can therefore be interpreted, at least in part, in terms of the hegemony model, while they at the same time strengthen the dominant overall structure of the network as a centralized one around a number of financial corporations.

Finally, it was possible to relate a significant number of primary production interlocks to institutional links between complementary corporations. These interlocks should be interpreted in terms of the resource-dependence model: they were scattered around the whole network, linking complementary corporations irrespective of their centrality in the overall network.

## NOTES

- 1 The data for the Dutch network of interlocking directorships were partly collected by project groups of students at the University of Groningen under the direction of Frans N. Stokman. Data collection was completed by John Buissink, Rob Mos and Eric van Sonderen. Jos van der Werf wrote an extensive coding instruction for the economic variables of the corporations. Final checking of all data was performed by Frans N. Stokman. Gerbert Beekenkamp gave valuable suggestions for sources where the desirable biographical data could be obtained. Rob Mos investigated the careers of network specialists.
- 2 C&A was not selected because of lack of data. It would, however, have appeared as an isolate in the network owing to the closed family nature of the concern.
- 3 Due to the missing values, the discriminant analysis could be applied to only 135 production corporations. The four multinational corporations Shell, Unilever, Philips and AKZO were eliminated from the analysis because of their very large size. Their outlier positions would seriously disturb the results of the discriminant analysis.
- 4 The following biographical sources were used: the biographical documentation service of the Dutch Press Agency ANP (their information is mainly based on questionnaires); the European Financial Almanac; and the biographical documentation of one of the leading Dutch newspapers (NRC-Handelsblad).